



ENVIRONMENTAL HEALTH

Duwamish River - Seattle, Washington

Health Assessment Findings

Health Assessment Completed

The Washington State Department of Health (DOH), in cooperation with the Agency for Toxic Substances and Disease Registry (ATSDR), has completed a health assessment of the Duwamish River. The Environmental Protection Agency (EPA) listed part of the Duwamish River, known as the Lower Duwamish Waterway, as a Superfund Site on September 13, 2001.

DOH determines whether people are being exposed to harmful levels of chemicals by looking at the type and amount of chemicals people are exposed to; how they are exposed (breathing, eating or touching); how long they are exposed; and their age and physical characteristics.

Site Background

The Lower Duwamish Waterway site includes about 6 miles of the river starting from south of Harbor Island along the South Park neighborhood. The site is heavily industrialized and includes many residential homes. There are over 100 storm drains, combined sewer overflows, and miscellaneous outfalls that empty into the river. Considerable amounts of chemicals have been released into the river over the past 100 years.



Largest combined sewer overflow on the Duwamish River.

Contaminants of Concern

The primary contaminant of concern in the Duwamish River is polychlorinated biphenyls (PCBs). PCBs are known to cause developmental problems in infants and children. Other contaminants found in the Duwamish include arsenic, mercury, tributyltin, and polycyclic aromatic hydrocarbons (PAHs). Some of these are known or suspected of causing cancer.

Community Concerns

DOH gathered many community health concerns from people that fish and are involved in other activities related to the river. Common concerns expressed are:

- ◆ safety of eating salmon harvested from the river
- ◆ whether seafood at local markets is safe to eat
- ◆ lack of visible signs communicating that the river is contaminated
- ◆ lack of information warning people against eating seafood harvested from the Duwamish River.

Conclusions

1. Eating frequent meals of resident fish, fish that live in the Duwamish all year (English sole, flounder, perch) and rockfish (from Elliott Bay) may cause health problems, particularly for pregnant women. PCBs in these fish may affect the immune system and cause learning problems in children exposed in the womb.
2. The newest data regarding PCBs in Duwamish salmon show that levels are lower than in resident fish and similar to those found in salmon from other parts of Puget Sound. DOH is currently evaluating the health risks from eating fish throughout Puget Sound.

3. Public Health - Seattle King County conducts food inspections at markets four times a year. For more information on seafood safety at markets call Leonard Winchester at (206) 296-9842.

4. Public Health - Seattle King County warns that bottom fish, shellfish, and crab along urban areas of the King County shoreline, including Elliott Bay and the Duwamish River, may contain contaminants. DOH advises against eating shellfish taken from the King County shoreline (except Vashon-Maury Island).

5. Livers of English sole and the hepatopancreas organ in crabs caught in the Duwamish contain much more PCBs than fish fillets.

6. There is very little risk to swimmers from chemical contamination in the surface water of the Duwamish. However, there is a current advisory against swimming near combined sewer overflows because of raw sewage.

7. Contact with sediments for children playing on Duwamish River beaches and for people fishing with nets is not a public health hazard.

Recommendations

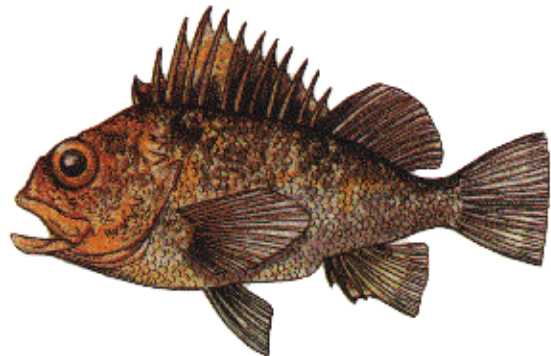
1. DOH supports King County's existing bottomfish/shellfish advisory. **In addition, eating any combination of English sole, flounder, and perch from the Duwamish River and rockfish from Elliot Bay should be limited to one meal per month.**

2. **Do not eat the hepatopancreas of crabs (see dark area in photo of crab below) or the livers from resident fish caught in the Duwamish River.**

3. **Do not eat shellfish (clams, mussels) from the Duwamish River.**



Shiner Perch



Rockfish



Flounder



English sole

Eat no more than one meal of any of the above fish per month.

4. Further evaluation of fish, shellfish and crab consumption is needed. Additional sampling of crab is important because limited data suggests that red rock and Dungeness crab have elevated levels of PCBs and mercury.

5. Signs with clear language about eating fish and shellfish from the Duwamish need to be posted where fishing is known or likely to occur.

- Involved agencies will evaluate the language, location and number of existing health advisory signs along the Duwamish River.
- Current language of existing signs may be modified to reflect findings of the health assessment.

6. Educational information on the existing advisory and the findings of the public health assessment should be provided to all populations potentially affected by the Duwamish River contamination.

- DOH will re-visit all community groups previously contacted to present the findings of the health assessment.
- DOH will provide informational materials in several languages and distribute to communities potentially affected by the Duwamish River.
- DOH will coordinate shellfish harvesting and safety education presentations, including showing a marine resource harvesting video in some native languages to those groups that want harvesting information.
- DOH will publish a public health message in *The Filipino American Bulletin* and in *The Voice* (the newspaper of the Seattle King County Housing Authority). The article in *The Voice* will be printed in English, Russian, Cambodian, and Vietnamese.

7. DOH supports the current advisory against swimming near combined sewer outfalls due to release of raw sewage.



Do not eat shellfish from the Duwamish River.

Community repositories for the public health assessment and related fact sheets will be established at the following locations:

Boulevard Park Library
12015 Roseberg Avenue South
Seattle, WA 98168
(206) 242-8662

South Park Community Center
8319 8th Avenue South
Seattle, WA 98101
(206) 684-7451

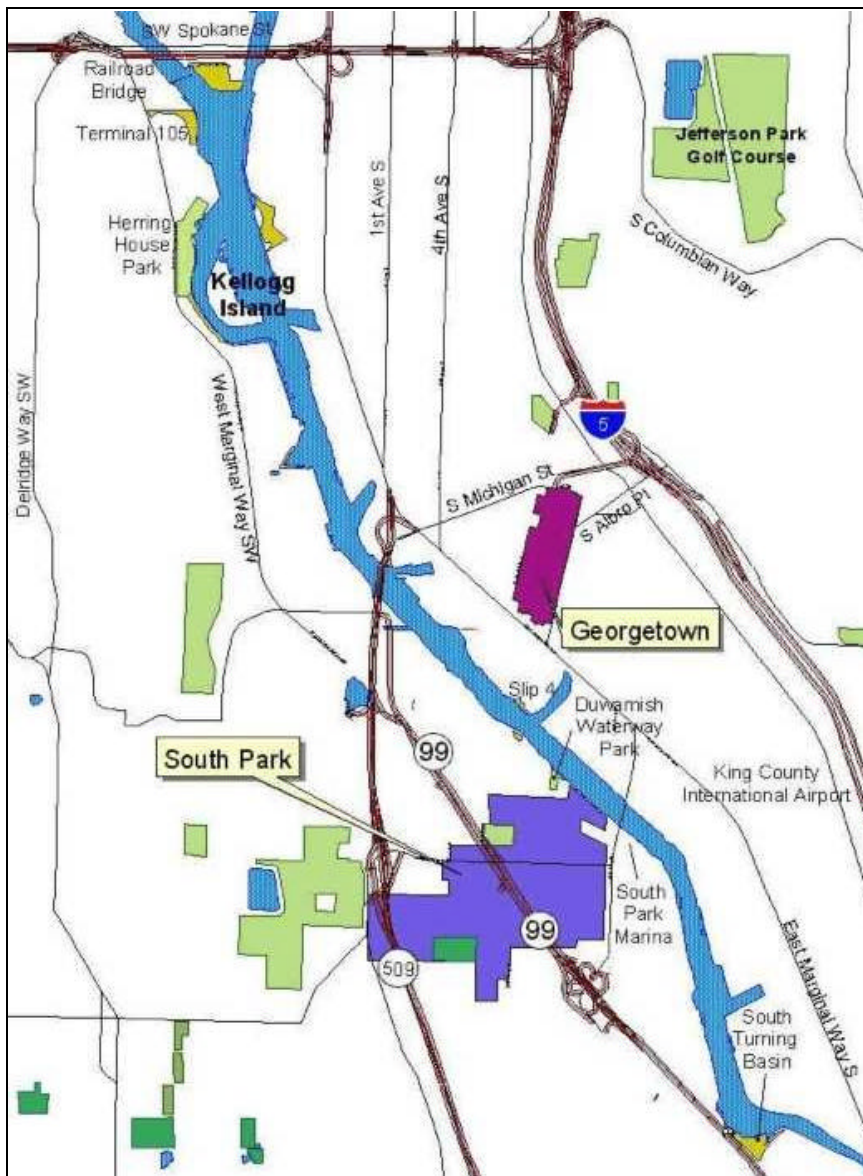
The public health assessment will be available for comment through August 30, 2002.

For information or a copy of the health assessment, call or e-mail:

Gary Palcisko
Public Health Assessor
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Lower Duwamish Waterway Site, Seattle, Washington



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